

WISCONSIN'S 2003 LAKE SUPERIOR CREEL CENSUS REPORT

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INTRODUCTION

A creel survey was conducted on Wisconsin waters of Lake Superior during the winter ice fishery (Jan. 22, 2003 to March 31, 2003), and during the open water fishery (Ice-out May 1, 2003 to September 30, 2003).

These surveys were designed to collect data on angler pressure, harvest and biological statistics. Five fishery types were surveyed.

1. Open water cold private (salmonids caught by non-charter parties).
2. Open water cool private (cool water species caught by non-charter parties).
3. Ice shallow water (less than 60 feet of water).
4. Ice cool water (targeting cool water species, i.e. walleye, northern pike, yellow perch).
5. Ice deep water, "bobbing" (60 feet and deeper).

Two additional fisheries were monitored using the results from mandatory reporting.

1. Charter fishery.
2. Sturgeon fishery.

The creel survey was designed to put special emphasis on the lake trout harvest in Wisconsin waters of Lake Superior. Due to budget restraints and to insure accuracy in the salmonid catch, certain predominately cool water sites, as well as the shore fishery, were dropped from the survey to allow more time at cold water (lake trout) access areas.

METHODS

OPEN WATER PRIVATE

In 2003, a single loop time interval creel survey was conducted during the open water fishing season on Wisconsin waters of Lake Superior. Three creel clerks worked four different routes: Cornucopia / Bark Point / Herbster / Port Wing (one route), Saxon Harbor, Superior and Washburn. (Figure 1). Due to budget restraints several routes could not be covered including Ashland, Bayfield, Sand Bay, and the December open water fishery. Data (angler trips, angler hours, and lake trout harvest) for these three sites were derived by taking the percent change that occurred for Washburn from 2000 to 2003 and applying it to the other each ports (Ashland, Bayfield and Sand Bay). December open water numbers were not extrapolated from known numbers due to the variability of the fishery. Each route consisted of various pressure sites the creel clerk checked. The sites selected and the amount of time spent at any given location were based on pressure counts from past years. The sites with the highest pressure were allotted a higher percentage of time to be checked during a route.

In a single loop time-interval creel, the clerk started and finished a route at the initial pressure site (i.e. one complete circuit). The initial pressure site, as well as the direction of travel, changed randomly according to computer generated schedules (Appendix I).

Using the time interval procedure, vehicles with boat trailers and harbor boats were counted at each access site. Boats going out to fish or coming in from fishing were counted as a fraction of the time the clerk spent at the site (i.e. boat pressure = amount of time the clerk has remaining at the site / total time spent at the site). A boat starting to fish was added to the initial pressure and a boat stopping or coming in from fishing was subtracted from the initial pressure. An example of a time interval pressure worksheet is shown in Appendix II.

The open water creel routes, start times, stop times, etc. are shown in Appendix III.

Boats coming in from fishing were interviewed at the site. Total number of anglers on board was treated as an angler party. The type of fishery they were involved in was recorded. If the boat was fishing for cool water species such as northern pike, walleye, perch, smallmouth bass in a predominately cool water area, it was recorded as "open water cool private". If the boat was fishing trout or salmon, it was recorded in "open water cold private". If the boat was fishing for

“anything that bites”, the area the boat fished would determine which category to place the boat in. Finally, if the boat did not fish at all it was placed in the category “pleasure”. Charter boats were not counted in pressure at a site due to mandatory reporting. Sailboats were also eliminated from the pressure unless fishing gear (downriggers or rods) was present. The state waters that the boat fished in was determined. Areas such as Saxon Harbor and Superior are adjoining boundary waters. Computer programming in the final estimation of total harvest eliminated fish caught in waters other than Wisconsin. Boats that fished both states’ waters had half the total catch assigned to Wisconsin waters.

The fish caught (if any) by the boat were identified and measured to the nearest tenth of an inch. Fin-clips were recorded as well as any tags that were present. An interview sample sheet is shown in Appendix V.

Route, month, weekday and weekend variables, as well as the type of fishery (cold water or cool water) calculated pressure and harvest estimates.

ICE CREEL

An ice fishery creel survey was conducted from the mainshore at Bonos Creek Landing (south of Washburn), to the northernmost area of fishing activity (Cornucopia/Bark Point) (Figure 1). The pressure estimate was done by the stratified creel survey method (Appendix IV). Two separate vehicle counts were made daily at approximately 9:00 AM and 2:00 PM for each site in a given random route. Vehicles present in morning and afternoon checks were not counted twice. An ice pressure sample sheet is shown in Appendix VI. Interviews for the ice fishery creel were conducted in the same manner as the open water method. The number of anglers in a vehicle was considered an angling party. Anglers involved in the ice fishery were separated into three different fisheries: ice shallow water, ice cool water and ice “bobbing”. Ice shallow water is considered fishing in waters less than 60 feet for salmonids, coregonids and smelt. Ice cool water is considered fishing for cool water species (yellow perch, walleye, northern pike, etc.). Ice “bobbing” is considered fishing in water deeper than 60 feet or more (mainly for lake trout).

The ice fishing pressure and harvest rates were separated by month, weekend and weekday variables, as well as the type of fishery in which the anglers were involved.

CHARTER

Harvest estimates for guided charters came from mandatory monthly reports that were initiated in 1973. Information on number of anglers, hours fished, location (grid number), and number of various species harvested was included in the monthly catch report (Appendix VII).

STURGEON

Harvest estimates on Lake Sturgeon were taken from mandatory registration. Pressure estimates were not available due to the incidental nature of the fishery.

The total number of lake trout harvested during the 2003 fishing year by sport angling was calculated using a weighted mean. Extrapolation of this number was done by fishery type, fishing port, harvest estimate, month, average length and percent of native origin fish. Weight extrapolated from the total harvest of this species was calculated using the length-weight regression equations from the DNR 2000, 2002 and 2003 spring lake trout assessment. The regression equation is as follows:

$$\begin{aligned} &\text{NATIVE ORIGIN} \\ \text{Ln}(\text{weight}) &= -11.4038 + 2.959798 (\text{Ln length}) \\ \text{Length} &= \text{mm} \\ \text{Weight} &= \text{grams} \end{aligned}$$

$$\begin{aligned} &\text{HATCHERY ORIGIN} \\ \text{Ln}(\text{weight}) &= -12.8094 + 3.182325 (\text{Ln length}) \\ &\text{NATIVE AND HATCHERY ORIGIN} \\ \text{Ln}(\text{weight}) &= -12.2171 + 3.089221 (\text{Ln length}) \end{aligned}$$

Weights for other species were calculated using regression equations from data collected on the R/V Hack Noyes during 1986-2003 field surveys, as well as DNR stream survey work. Weights for Chinook salmon were estimated using the Minnesota DNR Investigational Report # 382, Growth and Fecundity of Chinook salmon in Western Lake Superior (July 1985).

RESULTS

OPEN COLD WATER PRIVATE

EFFORT During 2003, an estimated 24,755 individual angler trips and 116,417 angler hours were spent pursuing salmonids in Wisconsin waters of Lake Superior (Table 1.) Of the Ports that were creel Corn. / Port Wing and Saxon Harbor were consistent with previous years. The Port of Washburn was down significantly. (Table 2).

HARVEST RATES The overall harvest rate for the port of Saxon Harbor (0.19 fish/hour) was up slightly from last year while Superior (0.16 fish/hour), Corn./Port Wing (0.15 fish/hour), and Washburn (0.10 fish/hour) were down slightly from last year. Lake trout harvest rates followed similar trends. Saxon Harbor had the highest lake trout catch rate with 0.16 lake trout per hour, and the only increase from last year. The Ports of Corn./Port Wing (0.10 LT/hour), Washburn (0.07 LT/hour) and Superior (0.05 LT/hour) were down slightly from last year. (Table 3-6).

HARVEST Approximately 14,178 fish were harvested during the open water season in the four areas creel. Lake trout were the most abundant species harvested accounting for 61.0% of the total catch with 8,647 (Table 7). Lake trout harvest was the highest out of the Corn./Port Wing area with a harvest of 3,111, followed by Saxon Harbor with a harvest of 2,606, Washburn totaled 1,614 lake trout and the Port of Superior had a lake trout harvest of 1,316 (Table 8-11).

Lake trout harvest rates (LT/angler hour) during the months of June – August were highest in Saxon Harbor (0.157), followed by Cornucopia / Port Wing (0.111), Washburn (0.078) and Superior (0.058). Rates from Saxon Harbor, Corn./Port Wing and Washburn were up slightly from last year while Superior was down (Table 12).

Walleye were the second most harvested species accounting for 17.4% of the harvest with 2,474 fish (Table 7). Average size of walleye in this fishery was 18.6" (Table 1). Coho salmon were third with 1,242 fish harvested accounting for 8.8% of the catch. Average size of cohos was 17.9". Chinook salmon ranked fourth with 1,012 fish harvested accounting for 7.1% of harvest. Average size of chinooks in this fishery was 20.9". Brown trout ranked fifth with 336 for 2.4%. Siscowet (fats) ranked sixth with 163 for 1.1%. No other species accounted for more than 0.6% of the total catch.

Harvest of native origin lake trout in all areas creel accounted for 84.8% of the total lake trout harvest in this fishery. Percent native lake trout harvest was highest out of Saxon Harbor with 99.2%, Washburn had 91.8% and Corn. / Port Wing with 80.1% a 7 % increase over last year (Table 13). Percent native numbers from the port of Superior were derived using 2002 numbers weighted in 2003 numbers. In this fishery the average size lake trout was 22.7" (Native origin average size was 22.6", Hatchery origin average size was 23.1").

Separating the estimated lake trout harvest of 10,603 by management zone in this fishery, 3,403 lake trout were caught in W-1 and 7,200 lake trout were harvested in W-2 (Table 14).

ICE FISHERY

Since this report emphasizes lake trout harvest, the ice fishery creel started when lake trout waters were accessible (Jan. 22, 2003). The shallow and cool water ice fisheries were not covered until then and the data in this report only represents partial numbers. Due to budget restraints only the Western side of Chequamegon Bay was creel and does not include data from the Ashland fishery.

The 2003 ice conditions were good (i.e solid ice, lack of slush and lack of deep snow). Anglers were able to access areas that are not commonly accessible.

ICE SHALLOW WATER

The shallow water fishing began on December 5, 2002 off the "S" Curve south of Washburn and ended March 31, 2003. The data in this report starts on Feb 1, 2003. An estimated 1,681 angler trips and 7,965 angler hours resulted in 1,035 fish harvested (Table 1). Whitefish were most often harvested accounting for 31.7% of the catch with 328 fish. Splake ranked second with a harvest of 221 (21.4%), smelt ranked third with 177 (17.1%), lake trout ranked fourth with 133 (12.9%).

Cornucopia also recorded a shallow water fishery this year. An estimated 16 angler trips and 50 angler hours resulted in a catch of 4 lake trout (Table 1).

ICE DEEP WATER BOBBING (APOSTLE ISLANDS INCL. MADELINE ISLAND)

An estimated 5,313 angler trips and 30,924 angler hours resulted in a harvest of 4,893 fish in this deep-water fishery (Table 1). Number of angler trips was second highest and angler hours was the highest since 1990 (Table 15). Lake trout were the most often harvested accounting for 57.7% of the harvest with 2,824 fish. Siscowets ranked second with 1,470 fish harvested for 30.0% of the harvest, whitefish third with 415 fish 8.5% (Table 16). Overall harvest rate of 0.158 fish per hour was the second lowest since 1991. The Lake trout harvest rate was 0.091 fish per hour was the second lowest

since 1991 (Table 17). The average size lake trout in this fishery was 24.6" native origin and 24.9" for hatchery origin (Table 14).

ICE COOL WATER FISHERY

The majority of the cool water fishery exists off the Ashland side of the Bay, however a small fishery exists off of Washburn and Bayfield with anglers targeting yellow perch and walleye. An estimated 16 angler trips and 96 angler hours occurred during our sample period. There were no fish reported harvested. Cornucopia also recorded a cool water fishery in 2003. An estimated 20 angler trips and 65 angler hours resulted in a catch of 5 northern pike.

ICE DEEP WATER BOBBING – CORNUCOPIA

Ice conditions were stable enough in 2003 to allow fishing out of Cornucopia. The season began on Jan. 22, 2003 and ended on March 20, 2003. An estimated 1,274 angler trips and 6,495 angler hours resulted in a harvest of 1,017 fish. The number of lake trout harvested was 994, followed by 21 siscowets and 2 cohos (Table 1). Lake trout harvest rate was 0.153 lake trout / hour.

Lake trout harvest rates in all areas of bobbing in 2003 resulted in a total lake trout harvest rate of 0.105 lake trout / hour. This rate is the second lowest since 1991 (Table 17).

CHARTER FISHERY

EFFORT 26 charter captains were active during the 2003 open water season on the Wisconsin waters of Lake Superior. The number of anglers (2,537) and number of angler hours (14,936) were slightly above previous year's numbers (Table 18). The number of anglers and the number of angler hours increased from last year in the Ports of Superior and Saxon and decreased out of the ports of Ashland/Bayfield/Washburn and Cornucopia / Port Wing (Table 19-22).

HARVEST RATES The overall harvest rate of 0.28 fish per hour and the lake trout harvest rate of 0.23 fish per hour were down slightly from previous years (Table 18). All ports were below last year's harvest rates and lake trout harvest rates except Saxon Harbor which was up slightly from last years numbers (Table 19-22).

HARVEST Lake trout remain the number one harvested fish in this fishery, comprising 82.1% (3,425) of the overall harvest of 4,170. Walleye second with 429 fish for 10.3% of the harvest. Chinook salmon was third with 164 fish for 3.9% of the harvest. Coho salmon fourth with 86 fish for 2.1% of the harvest (Table 23).

LAKE STURGEON FISHERY

Very few fishermen actually target sturgeon in Wisconsin waters of Lake Superior. The bulk of the harvest is incidental and occurs in Chequamegon Bay when angler pressure is at its height (ice fishery and the first month of open water). Harvest estimates are obtained from mandatory registration of angler caught sturgeon. In 2003, zero (0) sturgeon were registered. 93 sturgeon tags were issued locally in the Ashland, Bayfield and Washburn area (Table 24).

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TABLE 1. 2003 CREEL CENSUS STATISTICS

FISHERY TYPE	ANGL.	ANGL.				BRWN				ATL											RCK	BLH/	SUCK.		
	TRIPS	HOURS	LKT	COHO	CHIN.	TRT	SPLK.	RBT	BROK	SAL.	HOYI	FATS	WF	MEN.	HERR.	BURBOT	SMELT	NOP	WAE	YEP	BASS	CATF	SPP.	TOTALS	
CHARTER																									
ASH.BAYF.WASH.	1,151	6,499	1,550	41	17	18	6	3	2	1		4						3	4					1,649	
CORN. - PORT W.	381	2,198	635	21	26	10		3											9					704	
SAXON	131	872	211	3	3			1																218	
SUPERIOR	874	5,368	1,029	21	118	13		1											416				1	1,599	
TOTAL	2,537	14,937	3,425	86	164	41	6	8	2	1	0	4	0	0	0	0	0	3	429	0	0	0	1	4,170	
ICE																									
SHALLOW	1,681	7,965	133		25	44	221					11	328	13	37	46	177							1,035	
COOL WATER	16	96																						0	
APOS. ISL.-BOBB.	5,313	30,924	2,824	10	54		11				5	1,470	415		48	40	16							4,893	
CORN. SHAL.	16	50	4																					4	
CORN. COOL	20	65																5						5	
CORN. BOBB.	1,274	6,495	994	2								21												1,017	
TOTAL	8,320	45,595	3,955	12	79	44	232	0	0	0	5	1,502	743	13	85	86	193	5	0	0	0	0	0	6,954	
	AVERAGE SIZE		24.6	15.9	17.8	18.0	19.8				9.6	22.8	18.5	10.1	17.7	22.2	6.6	29.6							
OPEN COLD WATER- PRIVATE			*AREA NOT CREELED IN 2003- NUMBERS DERIVED FROM PREVIOUS YEARS*																						
ASHLAND	1,178	5,962	800																					800	
BAYFIELD	2,587	12,428	1,017																					1,017	
CORN. - PORT W.	6,848	31,388	3,111	349	592	116		47				137							237					4,589	
SAND BAY	215	776	139																					139	
SAXON	3,308	16,152	2,606	286	68	37					6	71		7										3,081	
SUPERIOR	5,387	25,434	1,316	303	200	37					9							41	2,186					4,092	
WASHBURN	5,232	24,277	1,614	304	152	146	66	4			11	14		27				27	51					2,416	
TOTAL	24,755	116,417	10,603	1,242	1,012	336	66	51	0	0	0	163	85	0	34	0	0	68	2,474	0	0	0	0	16,134	
	AVERAGE SIZE		22.7	17.9	20.9	20.8	18.0	25.0				23.7	20.4		18.7			26.7	18.6						
OPEN COOL WATER-PRIVATE																									
ASHLAND																								0	
BAYFIELD																								0	
CORN. - PORT W.	210	936	14		10													19	28					71	
SAXON																								0	
SUPERIOR	5,508	17,813																69	4,936	69	31	8		5,113	
WASHBURN	1,267	5,434																5	48	5				58	
TOTAL	6,985	24,183	14	0	10	0	0	0	0	0	0	0	0	0	0	0	0	93	5,012	74	31	8	0	5,242	
	AVERAGE SIZE		21.1		19.0													27.2	17.4	10.7	9.0				
STURGEON:			0 FISH STURGEON REGISTERED. 93 TAGS ISSUED(ASHLAND, BAYFIELD,WASHBURN ONLY)																						
GRAND TOTAL	42,597	201,132	17,997	1,340	1,265	421	304	59	2	1	5	1,669	828	13	119	86	193	169	7,915	74	31	8	1	32,500	
AVE. LENGTH (IN)			23.1	17.9	20.5	20.5	19.4	25.1				9.6	22.9	18.7	10.1	18.0	22.2	6.6	27.1	17.8	10.7	9.0			
AVE. WEIGHT (LBS)			3.83	1.93	3.01	3.49	2.59	6.00					3.69	2.18		1.59	3.17	.05	4.23	1.92	0.51				
TOTAL WEIGHT			68,842	2,580	3,813	1,469	789	355					6,169	1,804		190	272	10.5	715	15,162	37				
SAMPLE SIZE			1,339	157	106	39	28	5				1	205	72	1	13	4	7	18	731	6	1			

TABLE 2
ESTIMATED ANGLER EFFORT(ANGLER TRIPS AND ANGLER HOURS) BY AREA IN WISCONSIN WATERS
OF LAKE SUPERIOR COLD WATER OPEN PRIVATE. 1990-2003.

ANGLER TRIPS															
AREA	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	AVERAGE
ASHLAND	3,956		3,467	1,021	2,941						2,193				2,716
BAYFIELD					3,815						4,818				4,317
CORN. - PORT W.	6,126	3,506	5,554	6,295	6,646	6,486	4,030	3,392	6,888	5,792	3,664	6,913	6,351	6,848	5,607
SAND BAY					317						400				359
SAXON HARBOR	2,898	3,256	2,242	4,020	4,462	3,587	3,015	4,510	3,454	3,641	3,758	3,391	3,708	3,308	3,518
SUPERIOR	8,420	8,892	7,630	9,728	7,640	7,745	6,495	4,500	4,300	5,271	4,050		6,586	5,387	6,665
WASHBURN			9,252	6,891	7,925	7,256	6,120	5,967	8,257	12,337	9,744	7,774	8,463	5,232	7,935
BAYF.-WASHB.	14,396	15,105													14,751
TOTAL	35,796	30,759	28,145	27,955	33,746	25,074	19,660	18,369	22,899	27,041	28,627	18,078	25,108	20,775	

2000 Sand Bay data is extrapolated from know years.

ANGLER HOURS															
AREA	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	AVERAGE
ASHLAND	17,197		16,658	5,940	16,186						11,943				13,585
BAYFIELD					21,528						24,895				23,212
CORN. - PORT W.	26,089	16,003	26,707	25,798	28,284	26,971	18,493	15,295	26,983	26,891	15,489	29,656	29,443	31,388	24,535
SAND BAY					1,345						1,555				1,450
SAXON HARBOR	14,085	17,157	10,257	21,627	23,423	17,714	15,566	22,653	16,196	17,921	18,436	17,358	15,791	16,152	17,453
SUPERIOR	45,988	51,945	43,734	58,215	41,718	41,424	37,674	23,454	21,634	25,692	19,219		33,027	25,434	36,089
WASHBURN			48,185	36,428	37,729	35,750	26,588	26,133	35,275	56,503	48,631	38,769	37,015	24,277	37,607
BAYF.-WASHB.	66,820	77,534													72,177
TOTAL	170,179	162,639	145,541	148,008	170,213	121,859	98,321	87,535	100,088	127,007	140,168	85,783	115,276	97,251	

2000 Sand Bay data is extrapolated from know years.

TABLE 3. SAXON HARBOR OPEN WATER COLD PRIVATE. EFFORT, HARVEST RATES,
LAKE TROUT HARVEST RATES. 1988-2003.

YEAR	ANGLER TRIPS	ANGLER HOURS	TOTAL FISH HARVEST	FISH / HOUR	ANGLR. HRS / FISH	# OF LAKE TROUT	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1988	4,364	20,703	3,676	0.18	5.63	2,384	0.12	8.68
1989	4,765	24,744	4,627	0.19	5.35	3,327	0.13	7.44
1990	2,898	14,085	2,891	0.21	4.87	2,525	0.18	5.58
1991	3,256	17,157	2,419	0.14	7.09	1,735	0.10	9.89
1992	2,242	10,257	1,474	0.14	6.96	1,240	0.12	8.27
1993	4,020	21,627	2,910	0.13	7.43	2,234	0.10	9.68
1994	4,462	23,423	3,792	0.16	6.18	2,962	0.13	7.91
1995	3,587	17,714	2,557	0.14	6.93	1,631	0.09	10.86
1996	3,015	15,566	2,264	0.15	6.88	1,776	0.11	8.76
1997	4,510	22,653	4,795	0.21	4.72	3,271	0.14	6.93
1998	3,454	17,921	3,327	0.19	5.39	2,889	0.16	6.20
1999	3,641	16,196	4,450	0.27	3.64	2,224	0.14	7.28
2000	3,758	18,436	3,130	0.17	5.89	2,313	0.13	7.97
2001	3,391	17,358	3,499	0.20	4.96	2,593	0.15	6.69
2002	3,708	15,791	2,471	0.16	6.39	1,968	0.12	8.02
2003	3,308	16,152	3,081	0.19	5.24	2,606	0.16	6.20
TOTAL	58,379	289,783	51,363			37,678		
AVE.	3,649	18,111	3,210	0.18	5.64	2,355	0.13	7.69

TABLE 5. CORNUCOPIA / PORT WING OPEN WATER COLD PRIVATE. EFFORT, HARVEST RATES,
LAKE TROUT HARVEST RATES. 1988-2003.

YEAR	ANGLER TRIPS	ANGLER HOURS	TOTAL FISH HARVEST	FISH / HOUR	ANGLR. HRS / FISH	# OF LAKE TROUT	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1988	6,776	33,127	6,244	0.19	5.31	986	0.03	33.60
1989	6,893	31,880	3,724	0.12	8.56	1,109	0.03	28.75
1990	6,126	26,089	1,553	0.06	16.80	719	0.03	36.29
1991	3,506	16,003	1,758	0.11	9.10	1,101	0.07	14.53
1992	5,554	26,707	3,878	0.15	6.89	2,292	0.09	11.65
1993	6,295	25,798	3,184	0.12	8.10	1,591	0.06	16.21
1994	6,646	28,284	2,421	0.09	11.68	1,252	0.04	22.59
1995	6,486	26,971	2,806	0.10	9.61	925	0.03	29.16
1996	4,030	18,493	2,189	0.12	8.45	1,118	0.06	16.54
1997	3,392	15,295	2,098	0.14	7.29	896	0.06	17.07
1998	6,888	26,891	4,716	0.18	5.70	3,161	0.12	8.51
1999	5,792	26,983	4,979	0.18	5.42	2,515	0.09	10.73
2000	3,664	15,489	2,453	0.16	6.31	1,768	0.11	8.76
2001	6,913	29,656	5,318	0.18	5.58	3,949	0.13	7.51
2002	6,351	29,443	5,341	0.18	5.51	3,166	0.11	9.30
2003	6,848	31,388	4,589	0.15	6.84	3,111	0.10	10.09
TOTAL	92,160	408,497	57,251			29,659		
AVE.	5,760	25,531	3,578	0.14	7.14	1,854	0.07	13.77

TABLE 4. WASHBURN OPEN WATER COLD PRIVATE. EFFORT, HARVEST RATES,
LAKE TROUT HARVEST RATES. 1988-2003.

YEAR	ANGLER TRIPS	ANGLER HOURS	TOTAL FISH HARVEST	FISH / HOUR	ANGLR. HRS / FISH	# OF LAKE TROUT	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1988*	16,154	81,702	12,562	0.15	6.50	3,132	0.04	26.09
1989*	16,348	82,230	10,629	0.13	7.74	3,052	0.04	26.94
1990*	14,396	66,820	6,032	0.09	11.08	3,033	0.05	22.03
1991*	15,105	77,534	11,347	0.15	6.83	4,935	0.06	15.71
1992	9,252	48,185	5,996	0.12	8.04	2,369	0.05	20.34
1993	6,849	36,136	3,838	0.11	9.42	1,789	0.05	20.20
1994	7,925	37,729	7,066	0.19	5.34	1,549	0.04	24.36
1995	7,256	35,750	6,411	0.18	5.58	1,704	0.05	20.98
1996	6,120	26,588	3,801	0.14	7.00	2,469	0.09	10.77
1997	5,967	26,133	4,619	0.18	5.66	2,774	0.11	9.42
1998	8,257	56,503	5,543	0.10	10.19	4,119	0.07	13.72
1999	12,337	35,275	10,520	0.30	3.35	3,635	0.10	9.70
2000	9,744	48,631	7,046	0.14	6.90	3,716	0.08	13.09
2001	7,774	38,769	4,513	0.12	8.59	2,797	0.07	13.86
2002	8,463	37,015	4,662	0.13	7.94	2,797	0.08	13.23
2003	5,232	24,277	2,416	0.10	10.05	1,614	0.07	15.04
TOTAL	157,179	759,277	107,001			45,484		
AVE.	9,824	47,455	6,688	0.14	7.10	2,843	0.06	16.69

*1988-1991 DATA COMBINES BOTH BAYF. AND WASH.

TABLE 6. PORT OF SUPERIOR OPEN WATER COLD PRIVATE. EFFORT, HARVEST RATES,
LAKE TROUT HARVEST RATES. 1988-2003.

YEAR	ANGLER TRIPS	ANGLER HOURS	TOTAL FISH HARVEST	FISH / HOUR	ANGLR. HRS / FISH	# OF LAKE TROUT	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1988	10,537	58,693	10,163	0.17	5.78	5,155	0.09	11.39
1989	9,770	56,602	8,285	0.15	6.83	3,920	0.07	14.44
1990	8,420	45,988	4,770	0.10	9.64	2,932	0.06	15.68
1991	8,892	51,945	8,486	0.16	6.12	3,235	0.06	16.06
1992	7,630	43,734	6,460	0.15	6.77	2,587	0.06	16.91
1993	9,728	58,215	9,636	0.17	6.04	3,830	0.07	15.20
1994	7,640	41,718	3,588	0.09	11.63	1,962	0.05	21.26
1995	7,745	41,424	4,978	0.12	8.32	2,268	0.05	18.26
1996	6,495	37,674	3,702	0.10	10.18	1,488	0.04	25.32
1997	4,500	23,454	2,334	0.10	10.05	743	0.03	31.57
1998	4,300	25,692	2,477	0.10	10.37	1,359	0.05	18.91
1999	5,271	21,634	3,049	0.14	7.10	1,554	0.07	13.92
2000	4,050	19,219	2,513	0.13	7.65	1,681	0.09	11.43
2001								
2002	6,586	33,027	5,643	0.17	5.85	2,388	0.07	13.83
2003	5,387	25,434	4,092	0.16	6.22	1,316	0.05	19.33
TOTAL	106,951	584,453	80,176			36,418		
AVE.	7,130	38,964	5,345	0.14	7.29	2,428	0.06	16.05

NO CREEL CONDUCTED DURING 2001.

TABLE 7

WISCONSIN'S LAKE SUPERIOR. OPEN WATER COLD PRIVATE HARVEST 1988 - 2003.

(PERCENT OF TOTAL HARVEST PER YEAR IN PARENTHESES)

YEAR	LAKE TROUT	COHO SALMON	CHINOOK SALMON	BROWN TROUT	SPLAKE	RAINB. TROUT	ATL. SAL.	BROOK TROUT	FATS	WHITE FISH	HERR	MULE	BURBOT	SMELT	MUSKY	NOP	SMB	WAE	YEP	TOTAL HRVST
1988	12,266	15,306	5,081	1,342	993	456	40		117							72		159	4	35,836
1989	12,631	11,095	3,052	1,342	320	418	82	17	67					5		101	9	343	47	29,529
1990	10,089	2,822	1,477	1,141	369	49	13		122							5		369		16,456
1991	11,895	7,357	966	802	77	191	16		226							20		3,589		25,139
**	(47.3%)	(29.3%)	(3.8%)	(3.2%)	(0.3%)	(0.8%)	(0.1%)		(0.9%)							(0.1%)		(14.3%)		
1992	9,332	2,594	1,901	2,115	301	42	130	15	271							63		2,689		19,453
***	(48.0%)	(13.3%)	(9.8%)	(10.9%)	(1.5%)	(0.2%)	(0.7%)	(0.1%)	(1.4%)							(0.3%)		(13.8%)		
1993	10,158	3,367	2,436	710	36	82	29		325	12	59		16			82		3,026	3	20,341
***	(49.9%)	(16.6%)	(12.0%)	(3.5%)	(0.2%)	(0.4%)	(0.1%)		(1.6%)	(0.1%)	(0.3%)		(0.1%)			(0.4%)		(14.9%)	(0.0%)	
1994	10,187	8,682	923	896	278	84	30		89	21						68		797	21	22,076
**	(46.1%)	(39.3%)	(4.2%)	(4.1%)	(1.3%)	(0.4%)	(0.1%)		(0.4%)	(0.1%)						(0.3%)		(3.6%)	(0.1%)	
1995	9,236	7,263	1,311	390	283	40	64	12	702		6				9	8		270		19,594
*	(47.1%)	(37.1%)	(6.7%)	(2.0%)	(1.4%)	(0.2%)	(0.3%)	(0.1%)	(3.6%)		(0.0%)				(0.0%)	(0.0%)		(1.4%)		
1996	10,727	1,989	1,528	501	68	115	9	18	206	6	5					12		713		15,897
*	(67.5%)	(12.5%)	(9.6%)	(3.2%)	(0.4%)	(0.7%)	(0.1%)	(0.1%)	(1.3%)	(0.0%)	(0.0%)					(0.1%)		(4.5%)		
1997	12,035	3,121	1,234	594	335	50			247	6	38					56		481		18,197
*	(66.1%)	(17.2%)	(6.8%)	(3.3%)	(1.8%)	(0.3%)			(1.4%)	(0.0%)	(0.2%)					(0.3%)		(2.6%)		
1998	18,281	1,442	719	541	213	65	11		608	3	19					97		737		22,736
*	(80.4%)	(6.3%)	(3.2%)	(2.4%)	(0.9%)	(0.3%)	(0.0%)		(2.7%)	(0.0%)	(0.1%)					(0.4%)		(3.2%)		
1999	13,243	8,267	1,885	1,099	503	135			330	35	23					215		578		26,313
*	(50.3%)	(31.4%)	(7.2%)	(4.2%)	(1.9%)	(0.5%)			(1.3%)	(0.1%)	(0.1%)					(0.8%)		(2.2%)		
2000	14,001	3,596	1,219	1,227	374	101	18	18	150	25	12					138		220		21,099
**	(66.4%)	(17.0%)	(5.8%)	(5.8%)	(1.8%)	(0.5%)	(0.1%)	(0.1%)	(0.7%)	(0.1%)	(0.1%)					(0.7%)		(1.0%)		
2001	9,339	2,230	552	732	158	127			59	9						71		53		13,330
****	(70.1%)	(16.7%)	(4.1%)	(5.5%)	(1.2%)	(1.0%)			(0.4%)	(0.1%)						(0.5%)		(0.4%)		
2002	9,954	3,223	1,492	441	87	75			371	12	5	21				63		2,271	102	18,117
*	(54.9%)	(17.8%)	(8.2%)	(2.4%)	(0.5%)	(0.4%)			(2.0%)	(0.1%)	(0.0%)	(0.1%)				(0.3%)		(12.5%)	(0.6%)	
2003	8,647	1,242	1,012	336	66	51			163	85	34					68		2,474		14,178
*	(61.0%)	(8.8%)	(7.1%)	(2.4%)	(0.5%)	(0.4%)			(1.1%)	(0.6%)	(0.2%)					(0.5%)		(17.4%)		

* SAXON, WASHBURN, CORNUCOPIA / PORT WING, SUPERIOR.

*** SAXON, WASHBURN, CORNUCOPIA / PORT WING, SUPERIOR, ASHLAND.

** SAXON, WASHBURN, CORNUCOPIA / PORT WING, SUPERIOR, ASHLAND, BAYFIELD.

**** SAXON, WASHBURN, CORNUCOPIA / PORT WING.

TABLE 8
WISCONSIN'S LAKE SUPERIOR. PRIVATE OPEN WATER-COLD FISHERY HARVEST 1988 - 2003.
CORNUCOUPIA - PORT WING
(PERCENT OF TOTAL HARVEST PER YEAR IN PARENTHESES)

YEAR	LAKE TROUT	COHO SALMON	CHINOOK SALMON	BROWN TROUT	SPLAKE	RAINB. TROUT	ATLAN. SALMON	BROOK TROUT	FATS	HERR	SMELT	NOP	WAE	TOTAL HARVEST
1988	986 (15.8%)	3,296 (52.8%)	1,685 (27.0%)	182 (2.9%)			27 (0.4%)		55 (0.9%)				13 (0.2%)	6,244
1989	1,109 (29.8%)	1,739 (46.7%)	479 (12.9%)	309 (8.3%)		58 (1.6%)	8 (0.2%)						22 (0.6%)	3,724
1990	719 (46.3%)	509 (32.8%)	108 (7.0%)	217 (14.0%)										1,553
1991	1,101 (62.6%)	491 (27.9%)	39 (2.2%)	72 (4.1%)					19 (1.1%)				36 (2.0%)	1,758
1992	2,292 (59.1%)	797 (20.6%)	289 (7.5%)	186 (4.8%)		5 (0.1%)	24 (0.6%)		92 (2.4%)			4 (0.1%)	189 (4.9%)	3,878
1993	1,591 (50.0%)	898 (28.2%)	362 (11.4%)	111 (3.5%)	8 (0.3%)	10 (0.3%)	8 (0.3%)		105 (3.3%)	10 (0.3%)		11 (0.3%)	70 (2.2%)	3,184
1994	1,252 (51.7%)	555 (22.9%)	264 (10.9%)	248 (10.2%)		50 (2.1%)	25 (1.0%)		14 (0.6%)			13 (0.5%)		2,421
1995	925 (33.0%)	1,140 (40.6%)	285 (10.2%)	115 (4.1%)			17 (0.6%)		306 (10.9%)				18 (0.6%)	2,806
1996	1,118 (51.1%)	593 (27.1%)	203 (9.3%)	130 (5.9%)		81 (3.7%)		18 (0.8%)	38 (1.7%)				8 (0.4%)	2,189
1997	896 (42.7%)	579 (27.6%)	210 (10.0%)	252 (12.0%)		17 (0.8%)			75 (3.6%)			46 (2.2%)	23 (1.1%)	2,098
1998	3,161 (67.0%)	547 (11.6%)	264 (5.6%)	231 (4.9%)		11 (0.2%)			428 (9.1%)				74 (1.6%)	4,716
1999	2,515 (50.5%)	1,445 (29.0%)	469 (9.4%)	268 (5.4%)		36 (0.7%)			236 (4.7%)				10 (0.2%)	4,979
2000	1,786 (72.8%)	149 (6.1%)	251 (10.2%)	157 (6.4%)		17 (0.7%)	4 (0.2%)		82 (3.3%)				7 (0.3%)	2,453
2001	3,949 (74.3%)	594 (11.2%)	278 (5.2%)	236 (4.4%)	14 (0.3%)	122 (2.3%)			54 (1.0%)			36 (0.7%)	35 (0.7%)	5,318
2002	3,166 (59.3%)	982 (18.4%)	626 (11.7%)	129 (2.4%)		31 (0.6%)			296 (5.5%)			7 (0.1%)	104 (1.9%)	5,341
2003	3,111 (67.8%)	349 (7.6%)	592 (12.9%)	116 (2.5%)		47 (1.0%)			137 (3.0%)				237 (5.2%)	4,589

TABLE 9
WISCONSIN'S LAKE SUPERIOR. PRIVATE OPEN WATER-COLD FISHERY HARVEST 1988 - 2003.
SAXON HARBOR
(PERCENT OF TOTAL HARVEST PER YEAR IN PARENTHESES)

YEAR	LAKE TROUT	COHO SALMON	CHINOOK SALMON	BROWN TROUT	SPLAKE	RAINB. TROUT	ATLAN. SALMON	FATS	WHITE FISH	HERR	NOP	WAE	TOTAL HARVEST
1988	2,384 (64.9%)	1,126 (30.6%)	77 (2.1%)	6 (0.2%)	11 (0.3%)	72 (2.0%)							3,676
1989	3,327 (71.9%)	1,131 (24.4%)	37 (0.8%)	43 (0.9%)		89 (1.9%)							4,627
1990	2,525 (87.3%)	240 (8.3%)	115 (4.0%)	5 (0.2%)		6 (0.2%)							2,891
1991	1,735 (71.7%)	527 (21.8%)	74 (3.1%)	75 (3.1%)		5 (0.2%)		3 (0.1%)					2,419
1992	1,240 (84.1%)	188 (12.8%)	28 (1.9%)	18 (1.2%)									1,474
1993	2,234 (76.8%)	422 (14.5%)	210 (7.2%)	25 (0.9%)				11 (0.4%)		8 (0.3%)			2,910
1994	2,962 (78.1%)	702 (18.5%)	80 (2.1%)	46 (1.2%)					2 (0.1%)				3,792
1995	1,631 (63.8%)	801 (31.3%)	30 (1.2%)	20 (0.8%)			4 (0.2%)	71 (2.8%)					2,557
1996	1,776 (78.4%)	294 (13.0%)	64 (2.8%)	15 (0.7%)				109 (4.8%)	6 (0.3%)				2,264
1997	3,271 (68.2%)	1,102 (23.0%)	228 (4.8%)	42 (0.9%)	4 (0.1%)	7 (0.1%)		103 (2.1%)		38 (0.8%)			4,795
1998	2,889 (86.8%)	226 (6.8%)	37 (1.1%)	98 (2.9%)	3 (0.1%)	13 (0.4%)		47 (1.4%)		8 (0.2%)	6 (0.2%)		3,327
1999	2,224 (50.0%)	1,653 (37.1%)	346 (7.8%)	153 (3.4%)	3 (0.1%)	7 (0.2%)		16 (0.4%)	9 (0.2%)	3 (0.1%)		36 (0.8%)	4,450
2000	2,313 (73.9%)	560 (17.9%)	157 (5.0%)	89 (2.8%)	6 (0.2%)			5 (0.2%)					3,130
2001	2,593 (74.1%)	569 (16.3%)	94 (2.7%)	234 (6.7%)				5 (0.1%)				4 (0.1%)	3,499
2002	1,968 (79.6%)	270 (10.9%)	52 (2.1%)	50 (2.0%)		9 (0.4%)		4 (0.2%)	12 (0.5%)	5 (0.2%)		101 (4.1%)	2,471
2003	2,606 (84.6%)	286 (9.3%)	68 (2.2%)	37 (1.2%)				6 (0.2%)	71 (2.3%)	7 (0.2%)			3,081

TABLE 10

WISCONSIN'S LAKE SUPERIOR. PRIVATE OPEN WATER-COLD FISHERY HARVEST 1988 - 2003.

WASHBURN

(PERCENT OF TOTAL HARVEST PER YEAR IN PARENTHESES)

YEAR	LAKE TROUT	COHO SALMON	CHINOOK SALMON	BROWN TROUT	SPLAKE	RAINB. TROUT	ATLAN. SALMON	BROOK TROUT	FATS	WHITE FISH	MULE	HERR	NOP	WAE	YEP	TOTAL HARVEST
1988*	3,132 (24.9%)	7,221 (57.5%)	611 (4.9%)	892 (7.1%)	394 (3.1%)	312 (2.5%)										12,562
1989*	3,052 (28.7%)	5,851 (55.0%)	471 (4.4%)	751 (7.1%)	246 (2.3%)	128 (1.2%)	28 (0.3%)	13 (0.1%)					84 (0.8%)	5 (0.0%)		10,629
1990*	3,033 (50.3%)	1,546 (25.6%)	336 (5.6%)	767 (12.7%)	350 (5.8%)											6,032
1991*	4,935 (43.5%)	5535 (48.8%)	142 (1.3%)	482 (4.2%)	65 (0.6%)	109 (1.0%)			79 (0.7%)							11347
1992	2,369 (39.5%)	1,265 (21.1%)	584 (9.7%)	1,388 (23.1%)	294 (4.9%)	23 (0.4%)	24 (0.4%)	15 (0.3%)	16 (0.3%)				12 (0.2%)	6 (0.1%)		5,996
1993	1,789 (46.6%)	1,280 (33.4%)	298 (7.8%)	338 (8.8%)	28 (0.7%)	3 (0.1%)	10 (0.3%)		44 (1.1%)	12 (0.3%)		30 (0.8%)		3 (0.1%)	3 (0.1%)	3,838
1994	1,549 (21.9%)	4,943 (70.0%)	83 (1.2%)	311 (4.4%)	170 (2.4%)		5 (0.1%)		5 (0.1%)							7,066
1995	1,704 (26.6%)	4,002 (62.4%)	210 (3.3%)	180 (2.8%)	186 (2.9%)	12 (0.2%)	25 (0.4%)		78 (1.2%)			6 (0.1%)	8 (0.1%)			6,411
1996	2,469 (65.0%)	752 (19.8%)	237 (6.2%)	213 (5.6%)	68 (1.8%)	8 (0.2%)	9 (0.2%)		4 (0.1%)					12 (0.3%)	29 (0.8%)	3,801
1997	2,774 (60.1%)	1,107 (24.0%)	137 (3.0%)	199 (4.3%)	331 (7.2%)	24 (0.5%)			19 (0.4%)	6 (0.1%)				10 (0.2%)	12 (0.3%)	4,619
1998	4,199 (75.8%)	527 (9.5%)	144 (2.6%)	175 (3.2%)	205 (3.7%)	35 (0.6%)	11 (0.2%)		110 (2.0%)	3 (0.1%)		11 (0.2%)	91 (1.6%)	32 (0.6%)		5,543
1999	3,635 (34.6%)	4,599 (43.7%)	689 (6.5%)	564 (5.4%)	500 (4.8%)	71 (0.7%)			20 (0.2%)	26 (0.2%)		20 (0.2%)		205 (1.9%)	191 (1.8%)	10,520
2000	3,716 (52.7%)	2,113 (30.0%)	251 (3.6%)	517 (7.3%)	204 (2.9%)	45 (0.6%)	10 (0.1%)	15 (0.2%)	11 (0.2%)	15 (0.2%)		9 (0.1%)	88 (1.2%)	52 (0.7%)		7,046
2001	2,797 (62.0%)	1,067 (23.6%)	180 (4.0%)	262 (5.8%)	144 (3.2%)	5 (0.1%)				9 (0.2%)			17 (0.4%)	32 (0.7%)		4,513
2002	2,432 (52.2%)	1,255 (26.9%)	292 (6.3%)	206 (4.4%)	87 (1.9%)	19 (0.4%)					21 (0.5%)		56 (1.2%)	208 (4.5%)	86 (1.8%)	4,662
2003	1,614 (66.8%)	304 (12.6%)	152 (6.3%)	146 (6.0%)	66 (2.7%)	4 (0.2%)			11 (0.5%)	14 (0.6%)		27 (1.1%)	27 (1.1%)	51 (2.1%)		2,416

* 1988-1991 DATA COMBINES BOTH BAYFIELD AND WASHBURN

TABLE 11

WISCONSIN'S LAKE SUPERIOR. PRIVATE OPEN WATER-COLD FISHERY HARVEST 1988 - 2003.**PORT OF SUPERIOR**

(PERCENT OF TOTAL HARVEST PER YEAR IN PARENTHESES)

YEAR	LAKE TROUT	COHO SALMON	CHINOOK SALMON	BROWN TROUT	RAINB. TROUT	ATLAN. SALMON	SPALKE	BROOK TROUT	FATS	HERR	BURBOT	SMELT	MUSKY	NOP	WAE	YEP	TOTAL HARVEST
1988	5,155 (50.7%)	2,236 (22.0%)	2,461 (24.2%)	22 (0.2%)	72 (0.7%)	13 (0.1%)			62 (0.6%)						142 (1.4%)		10,163
1989	3,920 (47.3%)	1,808 (21.8%)	1,901 (22.9%)	83 (1.0%)	139 (1.7%)	46 (0.6%)		4 (0.0%)	67 (0.8%)			5 (0.1%)			312 (3.8%)		8,285
1990	2,932 (61.5%)	321 (6.7%)	881 (18.5%)	83 (1.7%)	43 (0.9%)	7 (0.1%)	7 (0.1%)		122 (2.6%)					5 (0.1%)	369 (7.7%)		4,770
1991	3,235 (38.1%)	598 (7.0%)	674 (7.9%)	194 (2.3%)	77 (0.9%)	10 (0.1%)			125 (1.5%)					20 (0.2%)	3,553 (41.9%)		8,486
1992	2,587 (40.0%)	185 (2.9%)	896 (13.9%)	69 (1.1%)	14 (0.2%)	67 (1.0%)			163 (2.5%)					20 (0.3%)	2,459 (38.1%)		6,460
1993	3,830 (39.7%)	741 (7.7%)	1,566 (16.3%)	203 (2.1%)	69 (0.7%)	11 (0.1%)			165 (1.7%)	11 (0.1%)	16 (0.2%)			71 (0.7%)	2,953 (30.6%)		9,636
1994	1,962 (54.7%)	354 (9.9%)	390 (10.9%)	34 (0.9%)					55 (1.5%)					34 (0.9%)	759 (21.2%)		3,588
1995	2,268 (45.6%)	1,316 (26.4%)	786 (15.8%)	33 (0.7%)	28 (0.6%)	18 (0.4%)	9 (0.2%)	12 (0.2%)	247 (5.0%)				9 (0.2%)		252 (5.1%)		4,978
1996	1,488 (40.2%)	317 (8.6%)	1,024 (27.7%)	116 (3.1%)	26 (0.7%)				55 (1.5%)						676 (18.3%)		3,702
1997	743 (31.8%)	333 (14.3%)	659 (28.2%)	101 (4.3%)	2 (0.1%)				50 (2.1%)						446 (19.1%)		2,334
1998	1,359 (54.9%)	142 (5.7%)	274 (11.1%)	37 (1.5%)	6 (0.2%)		5 (0.2%)		23 (0.9%)						631 (25.5%)		2,477
1999	1,554 (51.0%)	570 (18.7%)	381 (12.5%)	114 (3.7%)	21 (0.7%)				58 (1.9%)					10 (0.3%)	341 (11.2%)		3,049
2000	1,681 (66.9%)	135 (5.4%)	408 (16.2%)	72 (2.9%)	17 (0.7%)				37 (1.5%)					23 (0.9%)	140 (5.6%)		2,513
2001*	NO CREEL CONDUCTED DURING 2001.																0
2002	2,388 (42.3%)	716 (12.7%)	522 (9.3%)	56 (1.0%)	16 (0.3%)				71 (1.3%)						1,858 (32.9%)	16 (0.3%)	5,643
2003	1,316 (32.2%)	303 (7.4%)	200 (4.9%)	37 (0.9%)					9 (0.2%)					41 (1.0%)	2,186 (53.4%)		4,092

TABLE 12

OPEN WATER COLD PRIVATE LAKE TROUT HARVEST RATES (LAKE TROUT PER ANGLER HOUR) BY ROUTE, WISCONSIN WATERS OF LAKE SUPERIOR, JUNE - AUGUST 1989 - 2003.

YEAR	ASHLAND	BAYFIELD	CORNUCOPIA/	SAXON	SUPERIOR	WASHBURN	TOTAL
			PORT WING	HARBOR			
1989	0.054	N/A	0.049	0.145	0.087	0.080*	0.084
1990	0.103	N/A	0.038	0.201	0.075	0.084*	0.085
1991	N/A	N/A	0.084	0.124	0.063	0.086*	0.080
1992	0.073	N/A	0.097	0.104	0.057	0.080	0.076
1993	0.115	N/A	0.058	0.121	0.064	0.080	0.075
1994	0.081	0.081	0.058	0.145	0.039	0.062	0.071
1995	N/A	N/A	0.043	0.116	0.060	0.085	0.069
1996	N/A	N/A	0.075	0.118	0.041	0.119	0.078
1997	N/A	N/A	0.071	0.171	0.036	0.145	0.105
1998	N/A	N/A	0.127	0.280	0.050	0.139	0.133
1999	N/A	N/A	0.120	0.203	0.066	0.087	0.101
2000	0.225	0.106	0.136	0.172	0.095	0.122	0.131
2001	N/A	N/A	0.168	0.176	N/A	0.101	0.140
2002	N/A	N/A	0.102	0.141	0.070	0.077	0.091
2003	N/A	N/A	0.111	0.157	0.058	0.078	0.099

* WASHBURN AND BAYFIELD ROUTES COMBINED

TABLE 13

PERCENT NATIVE LAKE TROUT HARVESTED BY AREA, OPEN WATER COLD, PRIVATE BOAT 1985-2003.

YEAR	ASHLAND	CORNUCOPIA/	SAXON	SUPERIOR	TOTAL
	BAYFIELD WASHBURN				
1985	33.9	N/A	74.3	9.9	UNKNOWN
1986	38.0	22.0	67.0	16.5	UNKNOWN
1987	58.8	42.8	84.6	15.1	46.6
1988	57.0	26.9	90.4	15.7	43.8
1989	67.8	47.3	95.8	20.7	58.7
1990	62.3	67.2	95.5	27.0	60.7
1991	85.8	36.1	94.9	25.8	66
1992	82.4	66.8	92.0	25.3	64
1993	80.0	49.8	97.4	40.6	64
1994	82.1	49.4	98.0	48.8	76
1995	65.2*	72.1	94.3	46.9	67
1996	80.9*	75.6	98.1	57.0	79
1997	46.0*	44.4	96.9	56.3	68
1998	52.8*	45.6	98.8	57.8	63
1999	72.8*	57.9	96.3	49.4	70
2000	90.3	66.7	96.4	44.4	82.6
2001	88.3*	68.8	99.3	N/A	83.1
2002	92.1*	73.1	98.7	63.2	82.1
2003	91.8*	80.1	99.2	60.3@	84.8

* WASHBURN ROUTE ONLY

@ 2003 SUPERIOR % NATIVE DERIVED USING 2002 NUMBERS

TABLE 14
2003 LAKE TROUT EXTRACTION BY MANAGEMENT UNIT BY FISHERY

W-1				AVE				AVE		
	EST.	%	EST. #	SIZE	WEIGHTED		EST #	SIZE	WEIGHTED	SAMPLE
	CATCH	FIN CLIP	FINCLIP	FINCLIP	FIN CLIP	%NATIVE	NATIVE	NATIVE	NATIVE	SIZE
CHARTER										
CORN.-PORT WING	562	21.90	123	24.6	3027.719	78.10	439	22.7	9963.529	
SUPERIOR	1029	16.60	171	22.9	3911.641	83.40	858	22.0	18880.092	
TOTAL	1591	18.47	294	23.6	6939.359	81.53	1297	22.2	28843.621	

OPEN WATER-COLD										
CORN. - PORT W.	2087	21.90	457	24.6	11243.504	78.10	1630	22.7	36999.797	122
SUPERIOR	1316	39.67	522	22.9	11955.110	60.33	794	22.0	17466.742	133
TOTAL	3,403	28.77	979	23.7	23198.6137	71.23	2,424	22.5	54466.539	255

OPEN WATER-COOL										
CORN. - PORT W.	14	0.00	0		0.000	100.00	14	21.0	294.000	1

W-1 TOTAL	5,008	25.42	1273	23.7	30137.973	74.58	3,735	22.4	83604.160	256
WEIGHT (LBS)	18468.6707			4.2211	5373.4696			3.50608	13095.2011	

W-2

CHARTER										
ASH.-BAYF.-WASH.	1550	9.29	144	23.1	3326.285	90.71	1406	22.3	31353.912	
CORN.-PORT WING	73	15.80	12	22.0	253.748	84.20	61	22.5	1382.985	
SAXON	211	0.79	2	25.8	43.006	99.21	209	22.9	4793.728	
TOTAL	1,834	8.57	157	23.0	3623.03852	91.43	1,677	22.4	37530.624	

ICE										
SHALLOW	133	8.83	12	20.6	241.924	91.17	121	27.4	3322.417	7
BOBB. APOS. ISL.	2824	15.99	452	24.9	11243.784	84.01	2372	24.6	58362.083	325
BOBB. CORN.	994	37.61	374	24.5	9159.163	62.39	620	24.3	15069.805	140
CORNY SHALLOW	4	25.00	1	22.3	22.300	75.00	3	21.5	64.500	4
TOTAL	3,955	21.19	838	24.7	20667.172	78.81	3,117	24.6	76818.806	476

OPEN WATER-COLD										
ASHLAND	800	9.29	74	23.1	1716.792	90.71	726	22.3	16182.664	0
BAYFIELD	1017	9.29	94	23.1	2182.472	90.71	923	22.3	20572.212	0
CORNACOUPIA	1024	15.80	162	22.0	3559.424	84.20	862	22.5	19399.680	70
SAND BAY	139	9.29	13	23.1	298.293	90.71	126	22.3	2811.738	0
SAXON	2606	0.79	21	25.8	531.155	99.21	2585	22.9	59205.949	391
WASHBURN	1614	9.29	150	23.1	3463.628	90.71	1464	22.3	32648.525	146
TOTAL	7,200	7.14	514	22.9	11751.7632	92.86	6,686	22.6	150820.767	607

W-2 TOTAL	12,989	11.62	1,509	23.9	36041.9736	88.38	11,480	23.1	265170.197	1,083
WEIGHT (LBS)	50630.2463			4.3355	6543.8875			3.8404	44086.3588	

W-1, W-2 TOTAL	17,997	15.46	2,782	23.8	66179.9467	84.54	15,215	22.9	348774.357	1,339
WEIGHT (LBS)	68842.2131			4.2780	11903.0020			3.7424	56939.2111	

TABLE 15

**ESTIMATED ANGLER EFFORT(ANGLER TRIPS AND ANGLER HOURS) BY AREA IN WISCONSIN WATERS
OF LAKE SUPERIOR ICE FISHERY. 1990-2003.**

ANGLER TRIPS														
AREA	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
SHALLOW WATER	8,138	2,973	3,422	7,682	4,768	4,651	4,651	1,857	2,607	5,902	4,924	3,481	2,497	1,681
COOL WATER	2,389			2,252	1,040					192	145	164	185	16
APOS. ISL. - BOBB.	1,526	947	1,451	1,904	1,768	1,512	1,695	2,835	1,758	5,074	3,873	5,525	1,228	5,313
MAD. ISL. - BOBB.							813	741						
CORNOCUPIA SHAL.												10		16
CORNOCUPIA COOL											6	8		20
CORNOCUPIA - BOBB.	1,462	791	63		1,070	326	1,172	1,546			212	563		1,274
WESTERN END					2,280									
DEC BOATS									133	124	107			
TOTAL	13,515	4,711	4,936	11,838	10,926	6,489	8,331	6,979	4,498	11,292	9,267	9,751	3,910	8,320

ANGLER HOURS														
AREA	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
SHALLOW WATER	37,150	15,105	16,845	41,021	22,991	25,049	25,049	10,614	12,174	28,423	24,184	16,897	13,064	7,965
COOL WATER	8,600			9,620	4,602					1,097	761	946	812	96
APOS. ISL. - BOBB.	8,604	5,403	8,171	10,382	10,096	8,741	9,414	16,653	9,430	27,949	20,699	30,753	6,834	30,924
MADLINE ISLAND							4,273	4,473						
CORNOCUPIA SHAL.												16		50
CORNOCUPIA COOL											17	37		65
CORNOCUPIA - BOBB.	8,724	5,052	337		6,113	1,561	6,881	8,098	465		1,183	2,918		6,495
WESTERN END					14,698									
DEC BOATS										506	385			
TOTAL	63,078	25,560	25,353	61,023	58,500	35,351	45,617	39,838	22,069	57,975	47,229	51,567	20,710	45,595

TABLE 16
WISCONSIN'S LAKE SUPERIOR ICE FISHERY HARVEST 1987 - 2003.
APOSTLE ISLANDS BOBBING
(PERCENT OF TOTAL HARVEST PER YEAR IN PARENTHESES)

YEAR	LAKE TROUT	COHO SALMON	CHINOOK SALMON	BROWN TROUT	SPLAKE	RBT	FATS	WHITE FISH	MWF	HERR	HOYI	BURBOT	SMELT	NOP	WAE	MULE	TOTAL CATCH
1987	1,122 (94.5%)				65 (5.5%)												1,187
1988	717 (86.5%)	7 (0.8%)			105 (12.7%)												829
1989	733 (97.6%)			9 (1.2%)	9 (1.2%)												751
1990	539 (94.2%)	9 (1.6%)		11 (1.9%)	13 (2.3%)												572
1991	762 (97.8%)			4 (0.5%)	9 (1.2%)		4 (0.5%)										779
1992	1,343 (98.3%)						23 (1.7%)										1,366
1993	1,766 (88.2%)	21 (1.0%)	12 (0.6%)	12 (0.6%)	13 (0.6%)		67 (3.3%)		14 (0.7%)	44 (2.2%)		54 (2.7%)					2,003
1994	1,385 (67.0%)	11 (0.5%)					650 (31.5%)	5 (0.2%)				15 (0.7%)					2,066
1995	1,224 (73.3%)	68 (4.1%)	8 (0.5%)	10 (0.6%)	65 (3.9%)		62 (3.7%)	17 (1.0%)		76 (4.6%)		65 (3.9%)			75 (4.5%)		1,670
1996	1,016 (75.3%)	24 (1.8%)	22 (1.6%)				207 (15.3%)	20 (1.5%)		11 (0.8%)		43 (3.2%)	7 (0.5%)				1,350
1997	2,755 (68.2%)	8 (0.2%)	33 (0.8%)		52 (1.3%)		663 (16.4%)	23 (0.6%)		96 (2.4%)		275 (6.8%)	132 (3.3%)				4,037
1998	1,620 (69.9%)	68 (2.9%)	76 (3.3%)	51 (2.2%)	83 (3.6%)	3 (0.1%)	10 (0.4%)	86 (3.7%)		147 (6.3%)		167 (7.2%)	7 (0.3%)				2,318
1999	4,065 (58.5%)	187 (2.7%)	6 (0.1%)	42 (0.6%)	239 (3.4%)		216 (3.1%)	1,487 (21.4%)		216 (3.1%)		244 (3.5%)	240 (3.5%)	3 (0.0%)	7 (0.1%)		6,952
2000	2,857 (47.6%)	88 (1.5%)	3 (0.0%)	18 (0.3%)	73 (1.2%)		174 (2.9%)	2,125 (35.4%)		503 (8.4%)		85 (1.4%)	80 (1.3%)				6,006
2001	5,074 (65.8%)	262 (3.4%)	33 (0.4%)	42 (0.5%)	56 (0.7%)	6 (0.1%)	752 (9.7%)	1,029 (13.3%)		242 (3.1%)		158 (2.0%)	54 (0.7%)			6 (0.1%)	7,714
2002	531 (33.1%)	88 (5.5%)	36 (2.2%)	15 (0.9%)	20 (1.2%)		81 (5.0%)	280 (17.4%)		98 (6.1%)		36 (2.2%)	421 (26.2%)				1,606
2003	2,824 (57.7%)	10 (0.2%)	54 (1.1%)		11 (0.2%)		1,470 (30.0%)	415 (8.5%)		48 (1.0%)	5 (0.1%)	40 (0.8%)	16 (0.3%)				4,893

TABLE 17

ICE BOBBING. EFFORT, HARVEST RATES AND LAKE TROUT HARVEST RATES BY AREA 1991-2003.

* NO / LIMITED FISHING
PRESSURE
NOT CREELED

APOSTLE ISLANDS

	ANGL. TRPS	ANGL. HRS	TOT. FISH HRV.	FISH / HOUR	LAKE TROUT HARVEST	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1991	947	5,403	775	0.143	762	0.141	7.091
1992	1,451	8,171	1,366	0.167	1,343	0.164	6.084
1993	1,904	10,382	2,003	0.193	1,766	0.170	5.879
1994	1,768	10,096	2,066	0.205	1,385	0.137	7.290
1995	1,412	8,741	1,670	0.191	1,224	0.140	7.141
1996	2,508	13,687	2,237	0.163	1,453	0.106	9.420
1997	3,576	21,126	4,956	0.235	3,280	0.155	6.441
1998	1,758	9,430	2,318	0.246	1,620	0.172	5.821
1999	5,074	27,949	6,952	0.249	4,065	0.145	6.876
2000	3,873	20,699	6,006	0.290	2,857	0.138	7.245
2001	5,525	30,753	7,714	0.251	5,074	0.165	6.061
2002	1,228	6,834	1,606	0.235	531	0.078	12.870
2003	5,313	30,924	4,893	0.158	2,824	0.091	10.950
TOTAL	36,337	204,195	44,562		28,184		
AVE.	2,795	15,707	3,428	0.218	2,168	0.138	7.245

CORNUCOPIA / BARK BAY

	ANGL. TRPS	ANGL. HRS	TOT. FISH HRV.	FISH / HOUR	LAKE TROUT HARVEST	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1991	791	5,052	521	0.103	521	0.103	9.697
1992	63	337	73	0.217	70	0.208	4.814
1993*							
1994	1,070	6,113	1,384	0.226	1,198	0.196	5.103
1995	326	1,561	237	0.152	184	0.118	8.484
1996	1,172	6,881	1,035	0.150	844	0.123	8.153
1997	1,546	8,098	1,371	0.169	1,209	0.149	6.698
1998*							
1999*							
2000	212	1,183	255	0.216	251	0.212	4.713
2001	563	2,918	650	0.223	616	0.211	4.737
2002*							
2003	1,274	6,495	1017	0.157	994	0.153	6.534
TOTAL	7,017	38,638	6,543		5,887		
AVE.	780	4,293	727	0.169	654	0.152	6.563

WESTERN END

	ANGL. TRPS	ANGL. HRS.	TOT. FISH HRV.	FISH / HOUR	LAKE TROUT HARVEST	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1991*							
1992*							
1993*							
1994	2,280	14,698	1,993	0.136	1,993	0.136	7.375
1995*							
1996*							
1997*							
1998*							
1999*							
2000*							
2001*							
2002*							
2003*							
TOTAL	2,280	14,698	1,993	0.136	1,993	0.136	7.375

* NO OR LIMITED FISHING PRESSURE / NOT CREELED

TOTAL - ALL AREAS

	ANGL. TRPS	ANGL. HRS	TOT. FISH HRV.	FISH / HOUR	LAKE TROUT HARVEST	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1991	1,738	10,455	1,296	0.124	1,283	0.123	8.149
1992	1,514	8,508	1,439	0.169	1,413	0.166	6.021
1993	1,904	10,382	2,003	0.193	1,766	0.170	5.879
1994	5,118	30,907	5,443	0.176	4,576	0.148	6.754
1995	1,738	10,302	1,970	0.191	1,408	0.137	7.317
1996	3,680	20,568	3,272	0.159	2,297	0.112	8.954
1997	5,122	29,215	6,327	0.217	4,489	0.154	6.508
1998	1,758	9,430	2,318	0.246	1,620	0.172	5.821
1999	5,074	27,949	6,952	0.249	4,065	0.145	6.876
2000	4,085	21,882	6,261	0.286	3,108	0.142	7.041
2001	6,008	33,671	8,364	0.248	5,690	0.169	5.918
2002	1,228	6,834	1,606	0.235	531	0.078	12.870
2003	6,587	37,419	5,910	0.158	3,918	0.105	9.551
TOTAL	45,554	257,522	53,161		36,164		
AVE.	3,504	19,809	4,089	0.206	2,782	0.140	7.121

TABLE 18

**WISCONSIN'S LAKE SUPERIOR CHARTER EFFORT, HARVEST RATES AND LAKE TROUT
HARVEST RATES, 1973-2003.**

YEAR	# OF ACTIVE GUIDES	# OF ANGLERS	# OF ANGLER HOURS	# OF TOTAL FISH	FISH / HOUR	ANGL. HRS / FISH	# OF LAKE TROUT	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1973	25	3,907	26,695	4,680	0.18	5.70	4,108	0.15	6.50
1974	24	2,986	19,685	3,263	0.17	6.03	2,423	0.12	8.12
1975	19	3,305	21,765	4,873	0.22	4.47	3,836	0.18	5.67
1976	21	2,566	16,408	2,730	0.17	6.01	2,218	0.14	7.40
1977	19	2,611	16,233	2,977	0.18	5.45	2,442	0.15	6.65
1978	15	2,988	19,691	4,317	0.22	4.56	3,046	0.15	6.46
1979	13	2,711	16,232	4,085	0.25	3.97	3,537	0.22	4.59
1980	14	3,529	22,247	5,836	0.26	3.81	4,798	0.22	4.64
1981	15	2,781	18,019	3,927	0.22	4.59	3,246	0.18	5.55
1982*	18	3,151	20,641	5,860	0.28	3.52	5,302	0.26	3.89
1983*	20	3,377	21,876	6,674	0.31	3.28	5,531	0.25	3.96
1984	29	3,140	20,458	6,084	0.30	3.36	5,355	0.26	3.82
1985	31	3,546	22,817	7,969	0.35	2.86	6,723	0.29	3.39
1986	32	3,173	19,238	5,114	0.27	3.76	3,952	0.21	4.87
1987	42	4,100	25,782	6,603	0.26	3.90	5,423	0.21	4.75
1988	45	4,541	28,190	6,744	0.24	4.18	5,149	0.18	5.47
1989	49	5,174	33,447	7,623	0.23	4.39	4,867	0.15	6.87
1990	50	4,917	30,313	5,270	0.17	5.75	4,098	0.14	7.40
1991	46	4,223	24,937	6,244	0.25	3.99	4,268	0.17	5.84
1992	40	3,337	20,662	4,687	0.23	4.41	3,723	0.18	5.55
1993	38	3,366	19,882	4,550	0.23	4.37	3,635	0.18	5.47
1994	39	3,489	20,800	4,368	0.21	4.76	3,751	0.18	5.55
1995	38	3,120	18,524	4,139	0.22	4.48	3,423	0.18	5.41
1996	35	2,489	14,807	3,466	0.23	4.27	2,780	0.19	5.33
1997	30	2,344	14,350	3,713	0.26	3.86	3,028	0.21	4.74
1998	23	2,289	13,195	3,883	0.29	3.40	3,360	0.25	3.93
1999	26	2,213	13,197	3,860	0.29	3.42	2,931	0.22	4.50
2000	28	2,117	11,928	3,848	0.32	3.10	3,353	0.28	3.56
2001	23	1,794	10,231.5	3,408	0.33	3.00	3,008	0.29	3.40
2002	23	2,374	14,089	4,535	0.32	3.11	3,625	0.26	3.89
2003	26	2,537	14,936	4,170	0.28	3.58	3,425	0.23	4.36
TOTAL		98,195	611,276	149,500			120,364		
AVE.	29	3,168	19,719	4,823	0.24	4.09	3,883	0.20	5.08

* 1982 AND 1983 FIGURES INCLUDE SOME MINNESOTA AND MICHIGAN TRIPS LANDING IN WISCONSIN PORTS.

TABLE 19

WISCONSIN'S LAKE SUPERIOR CHARTER EFFORT, HARVEST RATES AND LAKE TROUT
HARVEST RATES, 1986-2003. SUPERIOR.

YEAR	# OF ACTIVE GUIDES	ANGLER TRIPS	ANGLER HOURS	TOTAL FISH HARVEST	FISH / HOUR	ANGLR. HRS / FISH	# OF LAKE TROUT	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1986	14	677	3,644	882	0.24	4.13	661	0.18	5.51
1987	20	1,122	6,603	2,357	0.36	2.80	1,982	0.30	3.33
1988	26	1,406	8,145	2,720	0.33	2.99	2,133	0.26	3.82
1989	28	1,694	10,305	3,010	0.29	3.42	1,742	0.17	5.92
1990	26	1,505	9,138	2,061	0.23	4.43	1,467	0.16	6.23
1991	24	1,159	6,905	2,224	0.32	3.10	1,263	0.18	5.47
1992	18	853	5,305	1,296	0.24	4.09	927	0.17	5.72
1993	15	1,045	5,843	1,517	0.26	3.85	974	0.17	6.00
1994	19	956	5,868	1,236	0.21	4.75	986	0.17	5.95
1995	15	714	4,188	847	0.20	4.94	518	0.12	8.08
1996	11	566	3,590	799	0.22	4.49	505	0.14	7.11
1997	9	683	4,613	937	0.20	4.92	518	0.11	8.91
1998	6	513	3,415	775	0.23	4.41	525	0.15	6.50
1999	7	595	3,830	831	0.22	4.61	521	0.14	7.35
2000	7	289	1,884	464	0.25	4.06	307	0.16	6.14
2001	5	36	181	72	0.40	2.51	43	0.24	4.21
2002	4	652	4,521	1,401	0.31	3.23	986	0.22	4.59
2003	6	874	5,367.5	1,599	0.30	3.36	1,029	0.19	5.22
TOTAL		15,339	93,346	25,028			17,087		
AVE.		852	5,186	1,390	0.27	3.73	949	0.18	5.46

TABLE 20

WISCONSIN'S LAKE SUPERIOR CHARTER EFFORT, HARVEST RATES AND LAKE TROUT
HARVEST RATES, 1988-2003. CORNUCOPIA / PORT WING.

YEAR	# OF ACTIVE GUIDES	ANGLER TRIPS	ANGLER HOURS	TOTAL FISH HARVEST	FISH / HOUR	ANGLR. HRS / FISH	# OF LAKE TROUT	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1988	7	709	3,995	1,119	0.28	3.57	769	0.19	5.20
1989	5	838	4,785	1,070	0.22	4.47	562	0.12	8.51
1990	7	867	4,823	983	0.20	4.91	718	0.15	6.72
1991	5	673	3,261	826	0.25	3.95	539	0.17	6.05
1992	7	581	2,960	793	0.27	3.73	585	0.20	5.06
1993	5	382	1,923	463	0.24	4.15	342	0.18	5.62
1994	5	474	2,588	552	0.21	4.69	460	0.18	5.63
1995	4	418	2,016	648	0.32	3.11	452	0.22	4.46
1996	4	345	1,747	799	0.46	2.19	383	0.22	4.56
1997	5	287	1,463	491	0.34	2.98	380	0.26	3.85
1998	4	417	2,095	965	0.46	2.17	767	0.37	2.73
1999	4	341	2,033	755	0.37	2.69	511	0.25	3.98
2000	4	280	1,592	735	0.46	2.17	604	0.38	2.64
2001	4	420	2,397	838	0.35	2.86	669	0.28	3.58
2002	4	465	2,698	1,079	0.40	2.50	856	0.32	3.15
2003	4	381	2,198	704	0.32	3.12	635	0.29	3.46
TOTAL		7,878	42,574	12,820			9,232		
AVE.		492	2,661	801	0.30	3.32	577	0.22	4.61

TABLE 21

WISCONSIN'S LAKE SUPERIOR CHARTER EFFORT, HARVEST RATES AND LAKE TROUT
HARVEST RATES, 1988-2003. ASHLAND, BAYFIELD, WASHBURN.

YEAR	# OF ACTIVE GUIDES	ANGLER TRIPS	ANGLER HOURS	TOTAL FISH HARVEST	FISH / HOUR	ANGLR. HRS / FISH	# OF LAKE TROUT	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1988	10	2,194	14,449	2,476	0.17	5.84	1,868	0.13	7.74
1989	14	2,372	16,581	3,050	0.18	5.44	2,127	0.13	7.80
1990	15	2,233	14,647	1,895	0.13	7.73	1,590	0.11	9.21
1991	15	2,208	13,448	2,864	0.21	4.70	2,158	0.16	6.23
1992	13	1,758	11,455	2,312	0.20	4.95	1,938	0.17	5.91
1993	16	1,755	10,800	2,243	0.21	4.81	2,012	0.19	5.37
1994	13	1,761	10,404	2,068	0.20	5.03	1,818	0.17	5.72
1995	17	1,708	10,434	2,225	0.21	4.69	1,891	0.18	5.52
1996	18	1,418	8,470	1,865	0.22	4.54	1,655	0.20	5.12
1997	14	1,250	7,502	2,059	0.27	3.64	1,908	0.25	3.93
1998	10	1,126	6,322	1,751	0.28	3.61	1,683	0.27	3.76
1999	13	1,121	6,234	2,003	0.32	3.11	1,650	0.26	3.78
2000	15	1,365	7,360	2,342	0.32	3.14	2,146	0.29	3.43
2001	13	1,248	7,089.5	2,341	0.33	3.03	2,146	0.30	3.30
2002	14	1,196	6,529	1,975	0.30	3.31	1,711	0.26	3.82
2003	14	1,151	6,498.5	1,649	0.25	3.94	1,550	0.24	4.19
TOTAL		25,864	158,223	35,118			29,851		
AVE.		1,617	9,889	2,195	0.22	4.51	1,866	0.19	5.30

TABLE 22

WISCONSIN'S LAKE SUPERIOR CHARTER EFFORT, HARVEST RATES AND LAKE TROUT
HARVEST RATES, 1986-2003. SAXON HARBOR.

YEAR	# OF ACTIVE GUIDES	ANGLER TRIPS	ANGLER HOURS	TOTAL FISH HARVEST	FISH / HOUR	ANGLR. HRS / FISH	# OF LAKE TROUT	LAKE TROUT / HOUR	ANGLR. HRS / LKT
1986	4	529	3,265	1,127	0.35	2.90	955	0.29	3.42
1987	2	149	923	305	0.33	3.03	287	0.31	3.22
1988	2	232	1,601	429	0.27	3.73	379	0.24	4.22
1989	2	270	1,840	523	0.28	3.52	436	0.24	4.22
1990	2	312	1,705	331	0.19	5.15	314	0.18	5.43
1991	2	183	1,323	333	0.25	3.97	308	0.23	4.30
1992	2	145	943	286	0.30	3.30	273	0.29	3.45
1993	2	184	1,316	323	0.25	4.07	307	0.23	4.29
1994	2	298	1,940	512	0.26	3.79	487	0.25	3.98
1995	2	280	1,886	419	0.22	4.50	382	0.20	4.94
1996	2	160	1,000	262	0.26	3.82	237	0.24	4.22
1997	2	124	772	226	0.29	3.42	222	0.29	3.48
1998	2	233	1,363	389	0.29	3.50	385	0.28	3.54
1999	2	156	1,100	271	0.25	4.06	249	0.23	4.42
2000	2	183	1,093	307	0.28	3.56	296	0.27	3.69
2001	1	90	564	157	0.28	3.59	150	0.27	3.76
2002	1	61	341	80	0.23	4.26	72	0.21	4.74
2003	2	131	872	218	0.25	4.00	211	0.24	4.13
TOTAL		3,720	23,847	6,498			5,950		
AVE.		207	1,325	361	0.27	3.67	331	0.25	4.01

TABLE 23

WISCONSIN'S LAKE SUPERIOR CHARTER FISHERY HARVEST 1982 - 2003.

(PERCENT OF TOTAL HARVEST PER YEAR IN PARENTHESES)

YEAR	LAKE TROUT	COHO SALMON	CHINOOK SALMON	BROWN TROUT	RAINBOW TROUT	SPLAKE	ATL. SALMON	PINK SALMON	SISCOWET	WALLEYE	NORTH. PIKE	BROOK	OTHER	TOTAL CATCH
1982	5,163	286	113	31	35	27							34	5,689
1983	5,531	676	260	65	79	37							26	6,674
1984	5,355	389	150	29	54	58							49	6,084
1985	6,723	524	552	29	51	37							53	7,969
1986	3,952	720	301	72	32	29				30			8	5,144
1987	5,432	520	458	72	69	38				9			5	6,603
1988	5,149	850	576	81	48	23				7			10	6,744
1989	4,867	1,761	684	145	92	31	12			15			5	7,612
1990	4,098	459	452	125	25	10	5			69			27	5,270
1991	4,268	848	333	131	20	6	9		4	616			9	6,244
1992	3,723	312	305	135	13	10	8		3	170			8	4,687
1993	3,635	269	400	73	7	4	4		1	145			12	4,550
1994	3,751 (85.9%)	331 (7.6%)	111 (2.5%)	45 (1.0%)	10 (0.2%)	22 (0.5%)	1 (0.0%)			88 (2.0%)			9 (0.2%)	4,368
1995	3,243 (78.4%)	536 (12.9%)	213 (5.1%)	72 (1.7%)	7 (0.2%)	10 (0.2%)	2 (0.0%)			45 (1.1%)			11 (0.3%)	4,139
1996	2,780 (80.2%)	368 (10.6%)	196 (5.7%)	33 (1.0%)	3 (0.1%)	19 (0.5%)				63 (1.8%)			4 (0.1%)	3,466
1997	3,028 (81.6%)	280 (7.5%)	266 (7.2%)	41 (1.1%)	9 (0.2%)	11 (0.3%)	2 (0.1%)		13 (0.4%)	60 (1.6%)			1 (0.0%)	3,711
1998	3,360 (86.5%)	228 (5.9%)	194 (5.0%)	32 (0.8%)	6 (0.2%)	5 (0.1%)	1 (0.0%)			47 (1.2%)			10 (0.3%)	3,883
1999	2,931 (75.9%)	542 (14.0%)	219 (5.7%)	61 (1.6%)	23 (0.6%)	30 (0.8%)	7 (0.2%)			35 (0.9%)			12 (0.3%)	3,860
2000	3,353 (87.1%)	174 (4.5%)	178 (4.6%)	75 (1.9%)	8 (0.2%)	4 (0.1%)	2 (0.1%)	2 (0.1%)		47 (1.2%)	5 (0.1%)			3,848
2001	3,008 (88.3%)	229 (6.7%)	65 (1.9%)	51 (1.5%)	14 (0.4%)	7 (0.2%)				31 (0.9%)	3 (0.1%)			3,408
2002	3,625 (79.9%)	425 (9.4%)	249 (5.5%)	69 (1.5%)	31 (0.7%)	9 (0.2%)	3 (0.1%)			123 (2.7%)		1 (0.0%)		4,535
2003	3,425 (82.1%)	86 (2.1%)	164 (3.9%)	41 (1.0%)	8 (0.2%)	6 (0.1%)	1 (0.0%)		4 (0.1%)	429 (10.3%)	3 (0.1%)	2 (0.0%)	1 (0.0%)	4,170

TABLE 24
STURGEON HARVEST, CHEQUAMEGON BAY, 1983-2003.

YEAR	ANGLER TAGS ISSUED*	TOTAL HARVEST	# HARVESTED 50" OR LARGER	AVERAGE SIZE(inch)	AVERAGE WEIGHT(lbs)
1983	unknown	2	2	55.0	unknown
1984	unknown	3	1	47.3	unknown
1985	unknown	5	3	51.8	unknown
1986	unknown	4	1	48.4	28.0
1987	unknown	0	0	--	--
1988	unknown	14	8	49.6	30.6
1989	unknown	11	2	46.6	28.0
1990	unknown	7	2	49.9	33.5
1991	unknown	2	2	55.8	44.5
1992	unknown	0	0	--	--
1993	unknown	1	1	64.0	55.0
1994	140	0	0	--	--
1995	unknown	2	2	63.0	59.0
1996	unknown	0	0	--	--
1997	97	1	1	57.8	46.0
1998	92	1	1	54.0	32.0
1999	124	6	6	55.3	40.2
2000	111	0	0	--	--
2001	74	2	2	51.75	--
2002	102	3	3	51.5	--
2003	93	0	0	--	--

Sturgeon minimum size limit increased from 40" to 50" in 1991.

*ANGLER TAGS ISSUED (ASHLAND, BAYFIELD, WASHBURN AREA ONLY)

APPENDIX 1.

LAKE SUPERIOR CREEL SURVEY TIME INTERVAL COUNT RANDOMIZATION
ROUTE = "PORT WING" MONTH = 'JULY' DAYTIME = 'WEEKEND' SHIFT = 'AM'

DATE (MM/DD/YY): ____ / ____ / ____

N=5

WEEKDAY (1) WEEKEND/HOLIDAY (2)

TIME	LOCATION	CODE	TIME ARRIVED	TIME DEPARTED	WEIGHTED COUNT
7:00	TRAVEL				
7:07	CORNUCOPIA	520	_____ : _____	_____ : _____	_____ : _____
8:56	TRAVEL				
9:11	BARK POINT	540	_____ : _____	_____ : _____	_____ : _____
9:46	TRAVEL				
9:54	HERBSTER	545	_____ : _____	_____ : _____	_____ : _____
10:05	TRAVEL				
10:17	PORT WING	555	_____ : _____	_____ : _____	_____ : _____
13:32	TRAVEL				
14:00	END OF SHIFT		_____ : _____	_____ : _____	_____ : _____

DAILY PRESSURE CHECK

CHECKPOINT

[illegible]

APPENDIX III. 2003 OPEN WATER CREEL ROUTES AND SHIFT TIME INFORMATION.

PORT / ROUTE			NUMBER OF NON- OVERLAPPING		TYPE OF CREEL	COMMENTS
	CREEL DATES	SHIFT TIMES	SHIFTS			
CORNUCOPIA - PORT WING	May 1, 2003 -	APRIL, SEPT.: AM shift: 7am - 2pm PM shifts: 2pm-8pm	2 weekend	Single Loop Time Interval	Both wkend days,	three random wkdays.
	Sept. 30, 2003	MAY-AUG: AM shift: 7am - 2pm PM shifts: 2pm-9pm	2 weekday			
SUPERIOR	May 10, 2003 -	5:30am - 1:30pm	2 weekend	Single Loop Time Interval	Both wkend days,	three random wkdays.
	Sept. 30, 2003	1:30pm - 9:30pm	2 weekday			
SAXON HARBOR	June 1, 2003 -	WKEND:7am-2pm or 1pm-9pm	2 weekend	Time Interval One Site	one weekend day,	2 or 3 weekdays. Part time clerk.
	Sept. 30, 2003	7am-10:30am; 10:30am - 2pm; 2pm - 5:30pm; 5pm - 9pm	4 weekday			
WASHBURN	May 12, 2003 -	APRIL, SEPT.:AM shift: 7am - 2pm PM shifts: 2pm-8pm	2 weekend	Time Interval One Site	Both wkend days,	three random wkdays.
	Sept. 30, 2003	MAY- AUG: AM shift: 7am - 2pm PM shifts: 2pm-9pm	2 weekday			

APPENDIX IV. 2003 ICE CREEL ROUTS AND SHIFT TIME INFORMATION.

PORT / ROUTE			NUMBER OF NON- OVERLAPPING		TYPE OF CREEL	COMMENTS
	CREEL DATES	SHIFT TIMES	SHIFTS			
Washburn / Bayfield	Jan. 22, 2002 -	9:00 Am-5:00PM	1 weekend	Stratified	2 Weekend shifts	3 Weekday shifts
	March 31, 2003		1 weekday			

APPENDIX V. INTERVIEW FORM

CHECK POINT _____

DATE _____ / _____ / _____

WKDAY - 1 WKEND - 2

1 - Coldwater open 2 - Coolwater open 3 - Ice shallow						4 - Ice cool water 5 - Ice bobbing 6 - Stream						7 - Pleasure 8 - Shore angler 9 - Tribal						FISHED IN: 1 - WI 2 - MN 3 - MI		TRIP: 1 - COMPLETE 2 - INCOMPLETE	
ANGLER IN PARTY _____						1 - RESIDENT 2 - NON-RESIDENT 3 - RES. / NONRES.						TIME START ____ : ____									
ANGLERS SUCCESSFUL _____												TIME END ____ : ____									
FISH SPECIES _____ NO. LEGAL _____						NO .SUBLEGAL _____															
RELEASED: SPECIES _____ NO. LEGAL _____						NO.SUBLEGAL _____															
SPECIES	CODE	LENGTH	FINCLIP	CODE	Tags / Color	SPECIES	CODE	LENGTH	FINCLIP	CODE	Tags / Color	SPECIES	CODE	LENGTH	FINCLIP	CODE	Tags / Color				

TOTAL NUMBER FISH KEPT _____

COMMENTS _____

APPENDIX VI. VEHICLE PRESSURE SHEET

Date ____/____/____ Weather: Time____ AirTemp.____

Mo. Day Year Precip.____

Day Type: (1) Weekday
(2) Weekend/Holiday

#	LOCATION	TIME		CARS				COMMENTS
				Res.		Non-Res.		
305	S" Curve							
307	Thompson Pk.							
311	West End							
319	Washb Coal Dk							
315	Washb marina							
321	Mem. Park							
331	Bodin Resort							
341	Sioux River							
343	Onion R. Beach							
345	Onion R. Mo.							
351	Pikes Bay							
355	Port Superior							
363	Bayfield							
366	Roy's Point							
370	Red Cliff							
380	Pag. Gnds.							
390	Raspberry Bay							
289	Sand Bar							
282	Bell Slip							
270	Hot Pond							
256	Reis Coal Dk.							
258	Kreher Park							
234	Ash. Boat Club							
246	Trebas							
204	2nd Landing							
470	Ice Rd.							
401	K'Punky Bay							
410	Jack Stewart							
420	Kron Beach							
440	NE Tip Mad.							
450	Russel Bay							
471	O' Briens							
480	LaPointe Park							
515	Martenson Rd.							
520	Cornucopia							
530	Roman Point							
540	Bark Point							

APPENDIX VII SPORT TROLLING LICENSE MONTHLY REPORT (FORM #9400-249).

FIGURE 1. MAJOR PORTS CREELED AND WISCONSIN MANAGEMENT ZONES.

